

PCT

# 4 1/2

RAW SEQUENCE LISTING                      DATE: 12/26/2000  
 PATENT APPLICATION: US/09/674,768              TIME: 13:23:18

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\12262000\I674768.raw

**ENTERED**

```

3 <110> APPLICANT: NEUHAUS, Ekkehard
4   MOEHLMANN, Torsten
5   GRAEVE-KAMPFENKEL, Karl-Heinz
6   TJADEN, Joachim
7   SCHELL, Jozef
8   MARTINI, Norbert
10 <120> TITLE OF INVENTION: Transgenic Plants with a Modified Activity of a Plastidial ADP/ATP
11   Translocator
13 <130> FILE REFERENCE: 0147-0215P
C--> 15 <140> CURRENT APPLICATION NUMBER: US/09/674,768
C--> 16 <141> CURRENT FILING DATE: 2000-11-06
18 <150> PRIOR APPLICATION NUMBER: 198 21 442.1 Germany
19 <151> PRIOR FILING DATE: 1998-05-13
21 <150> PRIOR APPLICATION NUMBER: PCT/EP99/03292
22 <151> PRIOR FILING DATE: 1999-05-12
24 <160> NUMBER OF SEQ ID NOS: 7
26 <170> SOFTWARE: PatentIn Ver. 2.1
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 37
30 <212> TYPE: DNA
31 <213> ORGANISM: Artificial Sequence
33 <220> FEATURE:
34 <223> OTHER INFORMATION: Description of Artificial Sequence: sense-primer
36 <400> SEQUENCE: 1
37 cgtgagagat agagagctcg agggctctgat tcaaacc 37
40 <210> SEQ ID NO: 2
41 <211> LENGTH: 26
42 <212> TYPE: DNA
43 <213> ORGANISM: Artificial Sequence
45 <220> FEATURE:
46 <223> OTHER INFORMATION: Description of Artificial Sequence: antisense-primer
48 <400> SEQUENCE: 2
49 gatacaacag gaatcctgga tgaagc 26
52 <210> SEQ ID NO: 3
53 <211> LENGTH: 56
54 <212> TYPE: DNA
55 <213> ORGANISM: Artificial Sequence
57 <220> FEATURE:
58 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
60 <400> SEQUENCE: 3
61 gaattcctgc agcccggggg atccactagt ctcgagaagt ggctgggggc ctttcc 56
64 <210> SEQ ID NO: 4
65 <211> LENGTH: 39
66 <212> TYPE: DNA
67 <213> ORGANISM: Artificial Sequence
69 <220> FEATURE:
70 <223> OTHER INFORMATION: Description of Artificial Sequence: primer

```

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/674,768

DATE: 12/26/2000  
 TIME: 13:23:18

Input Set : A:\PTO.txt  
 Output Set: N:\CRF3\12262000\I674768.raw

```

72 <400> SEQUENCE: 4
73 tctagagggcc aaggcgggccg cttcagcgga ctgcagtgcc 39
76 <210> SEQ ID NO: 5
77 <211> LENGTH: 589
78 <212> TYPE: PRT
79 <213> ORGANISM: Arabidopsis thaliana
81 <400> SEQUENCE: 5
82 Met Glu Ala Val Ile Gln Thr Arg Gly Leu Leu Ser Leu Pro Thr Lys
83 1 5 10 15
85 Pro Ile Gly Val Arg Ser Gln Leu Gln Pro Ser His Gly Leu Lys Gln
86 20 25 30
88 Arg Leu Phe Ala Ala Lys Pro Arg Asn Leu His Gly Cys Leu Tyr Pro
89 35 40 45
91 Leu Thr Gly Thr Arg Asn Phe Lys Pro Leu Ser Gln Pro Cys Met Gly
92 50 55 60
94 Phe Arg Phe Pro Thr Lys Arg Glu Ala Pro Ser Ser Tyr Ala Arg Arg
95 65 70 75 80
97 Arg Arg Gly Cys Trp Arg Arg Ser Cys Leu Arg Arg Ser Asp Ser Ala
98 85 90 95
100 Ala Val Val Ala Ser Arg Lys Ile Phe Gly Val Glu Val Ala Thr Leu
101 100 105 110
103 Lys Lys Ile Ile Pro Leu Gly Leu Met Phe Phe Cys Ile Leu Phe Asn
104 115 120 125
106 Tyr Thr Ile Leu Arg Asp Thr Lys Asp Val Leu Val Val Thr Ala Lys
107 130 135 140
109 Gly Ser Ser Ala Glu Ile Ile Pro Phe Leu Lys Thr Trp Val Asn Leu
110 145 150 155 160
112 Pro Met Ala Ile Gly Phe Met Leu Leu Tyr Thr Lys Leu Ser Asn Val
113 165 170 175
115 Leu Ser Lys Lys Ala Leu Phe Tyr Thr Val Ile Val Pro Phe Ile Ile
116 180 185 190
118 Tyr Phe Gly Gly Phe Gly Phe Val Met Tyr Pro Leu Ser Asn Tyr Ile
119 195 200 205
121 His Pro Glu Ala Leu Ala Asp Lys Leu Leu Thr Thr Leu Gly Pro Arg
122 210 215 220
124 Phe Met Gly Pro Ile Ala Ile Leu Arg Ile Trp Ser Phe Cys Leu Phe
125 225 230 235 240
127 Tyr Val Met Ala Glu Leu Trp Gly Ser Val Val Val Ser Val Leu Phe
128 245 250 255
130 Trp Gly Phe Ala Asn Gln Ile Thr Thr Val Asp Glu Ala Lys Lys Phe
131 260 265 270
133 Tyr Pro Leu Phe Gly Ile Gly Ala Asn Val Ala Leu Ile Phe Ser Gly
134 275 280 285
136 Arg Thr Val Lys Tyr Phe Ser Asn Leu Arg Lys Asn Leu Gly Pro Gly
137 290 295 300
139 Val Asp Gly Ser Phe Val Glu Ser His Asp Glu His Cys Gly Gly Asn
140 305 310 315 320
142 Gly Thr Arg Ile Cys Leu Ser Ile Gly Gly Ser Asn Arg Tyr Val Pro
143 325 330 335

```

## RAW SEQUENCE LISTING

DATE: 12/26/2000

PATENT APPLICATION: US/09/674,768

TIME: 13:23:18

Input Set : A:\PTO.txt

Output Set: N:\CRF3\12262000\I674768.raw

```

145 Leu Pro Thr Arg Ser Lys Asn Lys Lys Glu Lys Pro Lys Met Gly Thr
146           340           345           350
148 Met Glu Ser Leu Lys Phe Leu Val Ser Ser Pro Tyr Ile Arg Asp Leu
149           355           360           365
151 Ala Thr Leu Val Val Ala Tyr Gly Ile Ser Ile Asn Leu Val Glu Val
152           370           375           380
154 Thr Trp Lys Ser Lys Leu Lys Ala Gln Phe Pro Ser Pro Asn Glu Tyr
155 385           390           395           400
157 Ser Ala Phe Met Gly Ala Phe Ser Thr Cys Thr Gly Val Ala Thr Phe
158           405           410           415
160 Thr Met Met Leu Leu Ser Gln Tyr Val Phe Asn Lys Tyr Gly Trp Gly
161           420           425           430
163 Val Ala Ala Lys Ile Thr Pro Thr Val Leu Leu Leu Thr Gly Val Ala
164           435           440           445
166 Phe Phe Ser Leu Ile Leu Phe Gly Gly Pro Phe Ala Pro Leu Val Ala
167           450           455           460
169 Lys Leu Gly Met Thr Pro Leu Leu Ala Ala Val Tyr Val Gly Ala Leu
170 465           470           475           480
172 Gln Asn Ile Phe Ser Lys Ser Ala Lys Tyr Ser Leu Phe Asp Pro Cys
173           485           490           495
175 Lys Glu Met Ala Tyr Ile Pro Leu Asp Glu Asp Thr Lys Val Lys Gly
176           500           505           510
178 Lys Ala Ala Ile Asp Val Val Cys Asn Pro Leu Gly Lys Ser Gly Gly
179           515           520           525
181 Ala Leu Ile Gln Gln Phe Met Ile Leu Ser Phe Gly Ser Leu Ala Asn
182           530           535           540
184 Ser Thr Pro Tyr Leu Gly Met Ile Leu Leu Val Ile Val Thr Ala Trp
185 545           550           555           560
187 Leu Ala Ala Ala Lys Ser Leu Glu Gly Gln Phe Asn Ser Leu Arg Leu
188           565           570           575
190 Lys Lys Ser Leu Arg Arg Lys Trp Arg Glu Leu His Arg
191           580           585
195 <210> SEQ ID NO: 6
196 <211> LENGTH: 569
197 <212> TYPE: PRT
198 <213> ORGANISM: Arabidopsis thaliana
200 <400> SEQUENCE: 6
201 Met Glu Gly Leu Ile Gln Thr Arg Gly Ile Leu Ser Leu Pro Ala Ser
202 1           5           10           15
204 His Arg Ser Glu Lys Val Leu Gln Pro Ser His Gly Leu Lys Gln Arg
205           20           25           30
207 Leu Phe Thr Thr Asn Leu Pro Ala Leu Ser Leu Ser Leu Met Val Thr
208           35           40           45
210 Arg Asn Phe Lys Pro Phe Ser Lys Ser His Leu Gly Phe Arg Phe Pro
211           50           55           60
213 Thr Arg Arg Glu Ala Glu Asp Ser Leu Ala Arg Arg Lys Leu Arg Arg
214 65           70           75           80
216 Pro Arg Arg Lys Cys Val Asp Glu Gly Asp Thr Ala Ala Met Ala Val
217           85           90           95

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/674,768

DATE: 12/26/2000

TIME: 13:23:18

Input Set : A:\PTO.txt

Output Set: N:\CRF3\12262000\I674768.raw

```

219 Ser Pro Lys Ile Phe Gly Val Glu Val Thr Thr Leu Lys Lys Ile Val
220      100      105      110
222 Pro Leu Gly Leu Met Phe Phe Cys Ile Leu Phe Asn Tyr Thr Ile Leu
223      115      120      125
225 Arg Asp Thr Lys Asp Val Leu Val Val Thr Ala Lys Gly Ser Ser Ala
226      130      135      140
228 Glu Ile Ile Pro Phe Leu Lys Thr Trp Val Asn Val Pro Met Ala Ile
229 145      150      155      160
231 Gly Phe Met Leu Leu Tyr Thr Lys Leu Ser Asn Val Leu Ser Lys Lys
232      165      170      175
234 Ala Leu Phe Tyr Thr Val Ile Val Pro Phe Ile Val Tyr Phe Gly Ala
235      180      185      190
237 Phe Gly Phe Val Met Tyr Pro Arg Ser Asn Leu Ile Gln Pro Glu Ala
238      195      200      205
240 Leu Ala Asp Lys Leu Leu Ala Thr Leu Gly Pro Arg Phe Met Gly Pro
241      210      215      220
243 Leu Ala Ile Met Arg Ile Trp Ser Phe Cys Leu Phe Tyr Val Met Ala
244 225      230      235      240
246 Glu Leu Leu Trp Gly Ser Val Val Val Ser Val Leu Phe Trp Gly Phe Ala
247      245      250      255
249 Asn Gln Ile Thr Thr Val Asp Glu Ala Lys Lys Phe Tyr Pro Leu Phe
250      260      265      270
252 Gly Leu Gly Ala Asn Val Ala Leu Ile Phe Ser Gly Arg Thr Val Lys
253      275      280      285
255 Tyr Phe Ser Asn Met Arg Lys Asn Leu Gly Pro Gly Val Asp Gly Trp
256      290      295      300
258 Ala Val Ser Leu Lys Ala Met Met Ser Ile Val Val Gly Met Gly Leu
259 305      310      315      320
261 Ala Ile Cys Phe Leu Tyr Trp Trp Val Asn Arg Tyr Val Pro Leu Pro
262      325      330      335
264 Thr Arg Ser Lys Lys Lys Val Lys Pro Gln Met Gly Thr Met Glu
265      340      345      350
267 Ser Leu Lys Phe Leu Val Ser Ser Pro Tyr Ile Arg Asp Leu Ala Thr
268      355      360      365
270 Leu Val Val Ala Tyr Gly Ile Ser Ile Asn Leu Val Glu Val Thr Trp
271      370      375      380
273 Lys Ser Lys Leu Lys Ser Gln Phe Pro Ser Pro Asn Glu Tyr Ser Ala
274 385      390      395      400
276 Phe Met Gly Asp Phe Ser Thr Cys Thr Gly Ile Ala Thr Phe Thr Met
277      405      410      415
279 Met Leu Leu Ser Gln Tyr Val Phe Lys Lys Tyr Gly Trp Gly Val Ala
280      420      425      430
282 Ala Lys Ile Thr Pro Thr Val Leu Leu Leu Thr Gly Val Ala Phe Phe
283      435      440      445
285 Ser Leu Ile Leu Phe Gly Gly Pro Phe Ala Pro Leu Val Ala Lys Leu
286      450      455      460
288 Gly Met Thr Pro Leu Leu Ala Ala Val Tyr Val Val Pro Pro Glu Val
289 465      470      475      480
291 Ser Ser Ala Arg Val Gln Val Gln His Ser Ser Thr Pro Ser Ala Met

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/674,768

DATE: 12/26/2000

TIME: 13:23:18

Input Set : A:\PT0.txt

Output Set: N:\CRF3\12262000\1674768.raw

```

292          485          490          495
294 Gln Gln Cys Leu Tyr Pro Leu Asp Glu Val Ser Lys Val Lys Ala Lys
295          500          505          510
297 Leu Gln Leu Met Trp Ser Ala Thr Ile Gly Lys Ser Gly Gly Ala Leu
298          515          520          525
300 Ile Gln Gln Phe Met Ile Leu Thr Phe Gly Ser Leu Ala Asn Ser Thr
301          530          535          540
303 Pro Tyr Leu Gly Val Ile Leu Leu Gly Ile Val Thr Ala Trp Leu Ala
304 545          550          555          560
306 Ala Ala Lys Ser Leu Glu Gly Pro Val
307          565
311 <210> SEQ ID NO: 7
312 <211> LENGTH: 498
313 <212> TYPE: PRT
314 <213> ORGANISM: Rickettsia prowazekii
316 <400> SEQUENCE: 7
317 Met Ser Thr Ser Lys Ser Glu Asn Tyr Leu Ser Glu Leu Arg Lys Ile
318 1          5          10          15
320 Ile Trp Pro Ile Glu Gln Tyr Glu Asn Lys Lys Phe Leu Pro Leu Ala
321          20          25          30
323 Phe Met Met Phe Cys Ile Leu Leu Asn Tyr Ser Thr Leu Arg Ser Ile
324          35          40          45
326 Lys Asp Gly Phe Val Val Thr Asp Ile Gly Thr Glu Ser Ile Ser Phe
327          50          55          60
329 Leu Lys Thr Tyr Ile Val Leu Pro Ser Ala Val Ile Ala Met Ile Ile
330 65          70          75          80
332 Tyr Val Lys Leu Cys Asp Ile Leu Lys Gln Glu Asn Val Phe Tyr Val
333          85          90          95
335 Ile Thr Ser Phe Phe Leu Gly Tyr Phe Ala Leu Phe Ala Phe Val Leu
336          100          105          110
338 Tyr Pro Tyr Pro Asp Leu Val His Pro Asp His Lys Thr Ile Glu Ser
339          115          120          125
341 Leu Ser Leu Ala Tyr Pro Asn Phe Lys Trp Phe Ile Lys Ile Val Gly
342          130          135          140
344 Lys Trp Ser Phe Ala Ser Phe Tyr Thr Ile Ala Glu Leu Trp Gly Thr
345 145          150          155          160
347 Met Met Leu Ser Leu Leu Phe Trp Gln Phe Ala Asn Gln Ile Thr Lys
348          165          170          175
350 Ile Ala Glu Ala Lys Arg Phe Tyr Ser Met Phe Gly Leu Leu Ala Asn
351          180          185          190
353 Leu Ala Leu Pro Val Thr Ser Val Val Ile Gly Tyr Phe Leu His Glu
354          195          200          205
356 Lys Thr Gln Ile Val Ala Glu His Leu Lys Phe Val Pro Leu Phe Val
357          210          215          220
359 Ile Met Ile Thr Ser Ser Phe Leu Ile Ile Leu Thr Tyr Arg Trp Met
360 225          230          235          240
362 Asn Lys Asn Val Leu Thr Asp Pro Arg Leu Tyr Asp Pro Ala Leu Val
363          245          250          255
365 Lys Glu Lys Lys Thr Lys Ala Lys Leu Ser Phe Ile Glu Ser Leu Lys

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/674,768

DATE: 12/26/2000

TIME: 13:23:19

Input Set : A:\PTO.txt

Output Set: N:\CRF3\12262000\1674768.raw

E:15 M:270 C: Current Application Number differs, Replaced Application Number  
L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date